TRAINMASTER

S. A. LAMEY

ASSISTANT TRAINMASTER

J. L. GREEN

CHIEF DISPATCHER

L. FOSTER
Mexicali

SAN DIEGO & ARIZONA EASTERN RAILWAY COMPANY

TIJUANA AND TECATE RAILWAY COMPANY

TIMETABLE

86

EFFECTIVE SUNDAY, JULY 22, 1951

AT 12:01 A.M.

PACIFIC STANDARD TIME

FOR THE GOVERNMENT AND INFORMATION OF EMPLOYES ONLY

H. R. GERNREICH
Vice President and General Manager

EASTWARD								WESTWARD	
Capacity of sidings		SECOND CLASS	452 Freight	Mile Post or Kilometer Post	Timetable No. 86 July 22, 1951		Distance from El Centro	SECOND CLASS 451 Freight	
			Leave Daily		STATIONS			Arrive Daily	
San Diego yard No. 1-45	BKWOYP		AM 7.30	1.1	TO-R SAN DIEGO	S. D. & A. E. Ry.	147.0	PM 5.15	
	I			3.3	2.2 Naval Repair Base Crossing		144.8		
	P		7.45	4.8	1.5 TWELFTH ST. Natl. City		143.3	5.05	
10	P		7.56	7.4	2.6 CHULA VISTA JCT.		140.7	4.56	
32	P		8.03	9.1	1.7 BOAL		139.0	4.51	
16	P		8.09	11.1	2.0 PALM CITY		137.0	4.45	
Yd. Limits 64	KP		8.24	15.5	TO-R 4.4 SAN YSIDRO		132.6	4.33	
46	P		s 8.40	K 0.1	R 0.7 TIJUANA	T. & T. Ry.	131.9	s 4.23	
28			8.49	K 4.1	2.3 AGUA CALIENTE		129.6	4.15	
40	WP		f 9.08	K 13.6	5.5 GARCIA		124.1	f 3.57	
27	P		f 9.20	K 19.2	3.5 MATANUCA		120.6	f 3.46	
40	WYP		f 9.45	K 33.9	9.1 REDONDO		111.5	f 3.16	
36	P		10.44	K 52.9	11.8 LA PUERTA		99.7	2.40	
31 Yard Limits	WP		s 11.20	K 59.9	TO-R 4.4 TECATE		95.3	s 2.26	
18	P		f 11.55	K 70.9	6.8 LINDERO		88.5	f 1.55	
12	P		AM 11.59	60.3	0.7 DIVISION	S. D. & A. E. Ry.	87.8	1.52	
28	P		PM 12.40	65.8	TO 5.5 CAMPO		82.3	1.35	
28	WP		1.16	71.9	6.1 CLOVER FLAT		76.2	1.16	
28	P		1.49	78.4	6.5 PUEBLO		69.7	12.56	
38	YP		2.19	84.5	6.1 HIPASS		63.6	12.34 PM	
7	OWP		2.44	92.9	TO 8.4 JACUMBA		55.2	11.46 AM	
31	P		2.47	94.0	1.1 TITUS		54.2	11.43	
				96.0	2.0 DUBBERS		52.1		
15	P		3.14	100.7	4.7 CARRISO GORGE		47.4	11.16	
	P		3.21	102.3	1.6 TUNNEL 15 SPUR		45.8	11.04	
64	WP		3.51	109.7	7.4 DOS CABEZAS		38.4	10.29	
30	P		4.15	117.7	8.0 SUGAR LOAF		30.4	9.44	
39	WOP		4.30	122.5	4.8 COYOTE WELLS		25.6	9.19	
67 Yard Limits	P		4.53	130.0	TO 7.5 PLASTER CITY		18.1	8.52	
56 Yard Limits	P		5.22	139.8	9.8 SEELEY		8.3	8.23	
12			5.37	145.1	5.3 WILSIE		3.0	8.09	
Yard Limits	BKWYP		5.45 PM	148.1	TO-R 3.0 EL CENTRO		0.0	8.00 AM	
			Arrive Daily		(147.0)			Leave Daily	
			(10.15) 14.34		.....Time over District..... .....Average Speed per Hour.....			(9.15) 15.89	

Nos. 451 and 452 use SP main track between junction switch and SP station, El Centro, moving with caution. Schedule time and train orders for SD&AE trains apply at train-order signal.

Nos. 451 and 452 will operate as Mixed trains between Tijuana and Lindero, and handle passengers between those points only.

EAST-WARD ↓

Timetable No. 86

July 22, 1951

CHULA VISTA BRANCH

STATIONS

WEST-WARD

Capacity of sidings	Mile Post Location		STATIONS	Distance from K St. Chula Vista
San Diego yard	4.8		TWELFTH ST. Natl. City	4.8
			0.9	
	5.7		24th ST. Natl. City	3.9
			1.4	
	7.1		POTASH	2.5
			0.3	
	7.4		F STREET JCT.	2.2
			0.2	
	7.6		CHULA VISTA JCT.	2.0
			0.9	
	8.5	TO	CHULA VISTA	1.1
			1.1	
	9.6		K St. Chula Vista	0.0

(4.8)

EAST-WARD ↓

Timetable No. 86

July 22, 1951

CORONADO BRANCH

STATIONS

WEST-WARD

Capacity of sidings	Mile Post Location	STATIONS	Distance from North Island
	7.4	F STREET JCT.	13.9
		2.5	
18	9.9	SALT WORKS	11.4
		2.4	
	12.2	FORT EMORY	9.0
		6.0	
9	18.3	TENT CITY	3.0
		1.1	
	19.4	CORONADO	1.9
		1.9	
Yard Limits	21.3	NORTH ISLAND	0.0

(13.9)

Note: Navy tracks used beyond MP 21.3.

ADDITIONAL STATIONS
San Diego-El Centro Line

NAME		Mile Post		Capacity
Linen	(Spur)	9.5		16
Otay	(Spur)	10.1		48
Standard	(Spur)	5.9	K	4
Barrett	(Spur)	67.1		16
Clover Flat Pit	(Spur)	74.4		17
Mills Crossing		83.5		
Edgar	(Spur)	137.1		6

EAST-WARD ↓

Timetable No. 86

July 22, 1951

LA MESA BRANCH

STATIONS

WEST-WARD

Capacity of sidings	Mile Post Location		STATIONS	Distance from El Cajon
San Diego yard BKWOYP	1.1	TO-R	SAN DIEGO	15.7
			9.3	
3	10.4		LEMON GROVE	6.4
			1.9	
20	12.3		LA MESA	4.5
			3.0	
6	15.3		GROSSMONT	1.5
			1.5	
15	16.8		EL CAJON	0.0

(15.7)

RULE M. Employes are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their location and avoid personal injury.

RULE 10 (H) is changed to read: "Yellow signal must be placed one-fourth mile from structure," instead of three-fourths mile.

RULE 21 (D) will not apply to SP engines.

RULE 30. Engine bell must be rung continuously between the following points:

San Diego and Kilometer 7; Garcia and east end of Tunnel 2; Tecate and Campo; MP 96 and MP 106; San Diego and Mount Hope Cemetery.

RULE S-72. Westward regular trains are superior to trains of the same class in the opposite direction.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
	San Diego	4.8
	" (Chula Vista Branch)	7.4
	" (La Mesa Branch)	4.7
14.5	San Ysidro-Agua Caliente	K5.1
K58.9	Tecate	K62.2
128.5	Plaster City	131.9
138.5	Seeley	141.1
147.2	El Centro	
21.3	North Island (Coronado Branch)	

Yard limit boards on T&TRy. read "Patio Limite."

RULE 98. RAILROAD CROSSINGS NOT INTERLOCKED: At following grade crossings trains will stop not nearer than 50 feet nor farther than 500 feet from crossing and will proceed only on signal from flagman:

Crossing at Chula Vista. Exception—San Diego-El Centro line trains will expect to find the main track blocked and will pass over the crossing not to exceed 15 MPH.

RULE 103 (A). Switching movements across Fifth Ave., San Diego, must be protected by flagman.

Movements on Richfield Oil spur across Harbor Drive (Colton Ave.) San Diego, must be protected by flagman.

Movements on Navy spur across Eighth St. National City, must be protected by flagman account spur not connected to crossing signals.

At Fourth Ave., and at sidewalk on Third Ave. near Park Way, Chula Vista, stop and be preceded over crossing by flagman.

Movements on Fort Emory spur across State Highway must be protected by flagman.

Boulevard stops at Fourth St., Pomona Ave. and Orange Ave., Coronado, do not apply to trains.

Movements on Navy spur across Harbor Drive, foot of 13th St., National City, must be protected by flagman account crossing signals not connected to this track.

At La Mesa Blvd., La Mesa, stop and be preceded over crossing by flagman.

RULE 104. The normal position of junction switches at Twelfth St., National City and Chula Vista Jct. is for the San Diego-El Centro main track.

RULE 105. Capacity of Sidings column indicates the number of cars of average length of 49 feet that siding will hold between fouling points, in addition to one engine and caboose.

Track No. 1 in classification yard is siding for San Diego.

First crossover switch west of San Ysidro station is initial switch for westward trains; and west switch at west end of yard is initial switch for eastward trains.

East switch of siding Tijuana is initial switch for westward trains; and west crossover switch is initial switch for eastward trains.

RULE 221. Trains must obtain clearance before leaving:

San Diego.....Eastward trains.
San Ysidro, Tecate.....All trains.

AUTOMATIC BLOCK SIGNALS

RULE 505. When Signals No. 1022 and No. 1023 are in stop position, train shall stop and then proceed immediately with caution to Bridge No. 102.29, and await arrival of motor car patrolman following train, who will inspect bridge and authorize train to proceed if safe to do so.

RULE 535. Spring switches not equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while passing over them in facing movement, or in trailing through them:

Location		Normal Position
San Diego	Enginehouse lead	Main track

Spring switches are also located on other tracks as follows:

Stem switch on wye at San Diego, two on enginehouse lead, and five on enginehouse tracks at San Diego.

AUTOMATIC INTERLOCKING

Naval Repair Base Crossing, MP 3.3

Limits extend from home signal 450 feet west of crossing to home signal 450 feet east of crossing. Derails on Navy track only. Normal signal indication proceed for SD&AERy.

Trains and engines must not exceed 20 MPH between home signals.

If signal indicates "stop" observe Rule 663 and proceed. If signal indicates "stop" and not attended by trainman or operator on Navy track, and signal does not clear when train enters interlocking limits, make report from next train-order office.

GENERAL REGULATIONS

RULE 821. Speed of equipment over inundated tracks must not exceed 3 MPH, and the depth of water above top of rail must not be more than the following:

Diesel engines	3 inches
Streamlined passenger cars	6 inches
Roller bearing steam engines	9 inches
Other passenger cars and steam engines	12 inches

RULE 825. When necessary to cut crossing and a distance of 100 feet on each side cannot be provided, a flagman must protect. Cars must not be left in any position that would in any way intercept the view of an autoist or pedestrian of an approaching train unless crossing is protected as stated above.

When cars are left on grade not protected with derail they must be chained to the rail.

Cars must not be cut off train on grade, depending on hand brakes or air brakes to hold them, but must be placed with the engine.

RULE 827. Westward freight and mixed trains will stop not less than five minutes at Clover Flat or Campo and Tecate for cooling of wheels and inspection except that Diesel-powered freight and mixed trains with dynamic brake in operation may eliminate stops for heat radiation and inspection, unless in judgment of conductor a stop is necessary.

Eastward freight and mixed trains will stop not less than five minutes at Jacumba, Culvert 106.71, Sugar Loaf and Coyote Wells for cooling of wheels and inspection.

Engines running light on descending grade must stop for inspection at freight train inspection points, a sufficient length of time for engineer to assure himself that tires and machinery are in satisfactory condition.

On freight and mixed trains between Garcia and Matanuca, and on descending grades between Redondo and Coyote Wells, a member of crew must observe track to rear of train for evidence of derailment or any other condition requiring immediate stopping of train.

RULE 833. Whenever practicable locomotive cranes, or cranes of similar type must be handled in trains with heavy end forward.

Cranes or machines with rotating body, loaded on open cars, must not be moved until inspected and released by mechanical department. Conductors must not move Jordan Spreaders, except when in use, unless wings are protected against spreading by chain or tie bar extending from wing to wing and wing arm to wing arm.

RULE 836. Cars moved from one station to another ahead of engine on descending grade must be chained to the engine. Switching movements on descending grade must be protected by a derail. When practicable, engine must be kept on lower end of cars.

RULE 878. Engine flues must be sanded eastward approaching Hipass, westward when approaching Culvert 106.71.

Engine flues must not be sanded while passing places where damage from fire might result.

AIR BRAKE RULES

RULE 17. All retainers on freight and passenger trains must be used: Eastward Hipass to Jacumba, Culvert 106.71 to Coyote Wells, except that Diesel-powered freight and mixed trains with dynamic brake in operation and not exceeding 1550 tons may operate Hipass to Jacumba, and not exceeding 1000 tons between Culvert 106.71 and Coyote Wells without retainers unless requested by engineer. Trains with tonnage in excess of above must have one retainer for each 100 tons in train turned up solid on head end.

RULE 25. When helper engines are in trains, after a rear end test has been made, the leading engine must not attempt to start until the helper engine has whistled off. The helper engine must not whistle off until receiving signal from the rear, which will not be given before the air pressure on caboose gauge indicates seventy (70) pounds.

Rear end test must be made by all freight and mixed trains at Mills Crossing or Hipass, except that Diesel-powered freight and mixed trains not stopping at Hipass will make running test at Mills Crossing or Hipass. Conductor will observe brake pipe pressure gage on rear end and will not give proceed signal unless pressure is being restored following the application.

Rear end test must be made by eastward freight and mixed trains at Culvert 106.71.

Air must be cut in when handling cars on Commercial St. between 13th St. and 32nd St., San Diego.

RULE 33. Gross tonnage of any freight train must not exceed the following number of tons per operative brake between the stations named:

Hipass and Coyote Wells with steam engine	60 tons
Hipass and Coyote Wells with Diesel-engine with dynamic brake in operation	75 tons

If dynamic brake fails between Hipass and Jacumba, or Culvert 106.71 and Coyote Wells, stop must be made immediately and steam engine rules will govern. If tonnage exceeds 60 tons per operative brake, train may proceed at a speed that will insure safety, but must not exceed 15 MPH.

RULE 39. Running test must be made by passenger trains at Hipass.

Air brakes on two adjoining cars must not be cut out leaving any station where cars can be separated.

MISCELLANEOUS

Steam engines heavier than C class (200,000 pounds on drivers) are not permitted to operate on SD&AERy.

When pushing trains out of yards engine will not be placed behind wooden underframe equipment.

Helper engine or engines in Freight and Mixed Trains will be handled as follows:

EASTWARD between Redondo and Hipass: Helper or helpers must be cut in train so that one half of tonnage to be handled by helpers will be behind them.

WESTWARD between Coyote Wells and Hipass: When only one helper engine, this engine to be handled on head end of train. When two helpers, they must be cut in train so that one half of tonnage to be handled by helpers will be behind them.

Avoid taking water at emergency water stations at Redondo and Dos Cabezas. If necessary to take water, take only enough to reach next unrestricted water station.

Eastward trains and light engines have sufficient water in tank at Jacumba to make Calexico.

Eastward helpers making turn at Coyote Wells take full tank of water at Jacumba.

Engines weighing over 145,000 pounds on drivers are not permitted to operate on Chula Vista, Coronado and La Mesa branches.

Load limit (car and contents):

San Diego-El Centro	210,000 pounds
National City-Chula Vista	169,000 pounds
San Diego-North Island	169,000 pounds
San Diego-El Cajon	169,000 pounds

Unless authorized by General Manager, heavier loads must not be handled.

Employes of the SD&AERy., while performing service on tracks of the SP at or between El Centro and Calexico, are under jurisdiction of the officers and will be governed by Rules and Regulations of the Transportation Department, timetable and bulletins of the SP.

Should the movement of a Diesel-powered train be stopped with the diesel engine in the following tunnels:

Tunnel No. 8—between Titus and Carriso Gorge
" " 10—between Titus and Carriso Gorge
" " 14—between Carriso Gorge and Dos Cabezas

and it is found that it cannot be moved within a reasonable length of time, the train must be immediately secured by sufficient hand brakes, front and rear wheels of engine must be secured by blocks or chains, after which power plants and steam generator, if any, must be shut off.

INTERNATIONAL BOUNDARY

Trains approaching gate at International Boundary, San Ysidro, will sound one long blast of whistle to inform Government Officials of their presence. If prompt reponse is not gained after whistle blast, an employe will go at once to Government Headquarters and request service.

Trains will stop before crossing the International Boundary line at San Ysidro. Trains in both directions when not accompanied by Customs Immigration Rider will stop at Campo. Trains in both directions will stop at Tecate. Trains must not cross International Boundary line without first notifying Customs and Immigration Officers and obtaining necessary permission from them.

Westward trains coming into Tijuana, when not accompanied by rider, will proceed without stopping to Boundary line for inspection by officers of the Mexican Government, after which cars for Tijuana may be set out and necessary switching performed. Mixed trains will also stop passenger equipment at depot when passengers are handled.

STRUCTURES LESS THAN STANDARD CLEARANCE

Ice dock Boal is equipped with aprons which must be raised and secured before moving cars on adjoining track.

Pipe and counter-weights on Malt Plant, Tecate.

On Brewery spur, Tecate, pilaster at northwest corner of Malt building will not clear man on side of car, and pipes over track 30 ft. from east end will not clear man on top of car. Overhead wires will not clear man on top of car.

Corrugated iron shed north side of Oil spur, Tecate, back of station, and car puller at mill on same track will not clear man on side of car.

Fire Hydrant on Fourth Ave., at K St., San Diego.

Fire hydrant, power poles and street lights along east curb line of Fifth Ave., San Diego.

Union Oil Co. spur tracks, San Diego.

Sperry Flour Co. spur, San Diego.

Overhead highway bridge between Grossmont and El Cajon.

Gypsum chutes along track 4 of U. S. Gypsum Co., when in loading position.

INSTRUCTIONS IN CASE OF FIRE

1. FIRE FIGHTING EQUIPMENT:

(a) Five gallon fire extinguishers are located at following points:

West end Tunnel 1	East end Tunnel 13
West end Tunnel 2	West end Tunnel 14
West end Tunnel 3	West end Tunnel 15
East end Tunnel 3½	West end Tunnel 16
East end Tunnel 4	East end Tunnel 17
West end Tunnel 5	West end Tunnel 18
West end Bridge 97.39	West end Bridge 104.01
East end Tunnel 6	West end Bridge 104.17
Both ends Tunnel 8	West end Tunnel 19
West end Tunnel 10	West end Tunnel 20
West end Tunnel 11	West end Tunnel 21
West end Tunnel 12	

Note:—Fire extinguishers at tunnels are located just inside tunnel portals.

(b) Connections for portable phones in Carriso Gorge are located at following points:

Near West end Tunnel 5	Near both ends Tunnel 14
East end Tunnel 6	West end Tunnel 15
West end abandoned Tunnel 7	East end Tunnel 16
Both ends Tunnel 8	West end Tunnel 17
West end Tunnel 9	West end Tunnel 18
West end Tunnel 10	West end Tunnel 19
East end Tunnel 12	West end Tunnel 20
East end Tunnel 13	West end Tunnel 21

There are telephones at the east end of Tunnel 11 and at the east end of Bridge 102.29.

These connections are provided for emergency service only and anyone using them in an attempt to get help must, after his call has been placed, DISCONNECT HIS PORTABLE PHONE so that operator can call camps. Failure to disconnect phone will interfere with calling circuit.

(c) Tank car MW 1001:

Tank car MW 1001 with 10,000 gallons of water is kept first out at Tunnel 15 Spur. A pump is mounted on deck over top of tank which may be operated by either steam or air; 300 feet of fire hose on a reel; and a tool box containing fire-fighting tools and fittings. Car is equipped with headlights on each end; and extension cord to be plugged into socket in cab of engine is kept in tool box. Steam-air line to pump is fitted with hose connection at each end of car, so that pump may be operated from either end of engine or train, and by either steam or air. A length of steam hose and fittings are kept in tool box of tank car to make connections. When pump is run by air, automatic brake valve on engine should be held in Full Release position to increase volume of air.

(d) Fire hose and connections on engines:

Engine 101 and some others are equipped with fire hose connections on feed water line between the injector and the check valve. On deck of these engines there is a hose reel with hose and nozzle attached. When using hose, be sure to close valve ahead of the check valve before opening valve on the fire hose connection. This will prevent hot water backing up into hose line in case check valve fails to seat.

2. INSTRUCTIONS:

(a) Trains discovering a fire should immediately call operator so equipment can be dispatched to fire. If engine is equipped with fire fighting facilities, every effort should be made to extinguish the fire with the equipment on the engine. If it is evident that fire cannot be put out with equipment at hand and it is possible to reach tank car at Tunnel 15 Spur, get that car and return to the fire. Tank car should be picked up so that it will be headed into the fire ahead of engine or train. Stake and pinch bar are included with tools on deck of tank car. Tunnels and bridges in some places are located so close together that a fire may spread to another structure. While it might not be possible to extinguish the fire in one structure, equipment should stand by to prevent fire from spreading.

Employes will use their best judgment in meeting an emergency and act in the safest and quickest way to meet the conditions.

(b) Tank car MW 1001 must always be left, filled and first out at Tunnel 15 Spur.

SPEED TABLE

Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.
6	10.00	6.13	21	2.51	1.46	31	1.56	1.12	41	1.27	0.54
8	7.30	4.40	22	2.43	1.41	32	1.52	1.10	42	1.25	0.53
10	6.00	3.44	23	2.36	1.37	33	1.49	1.08	43	1.23	0.52
12	5.00	3.06	24	2.30	1.33	34	1.45	1.05	44	1.21	0.51
15	4.00	2.29	25	2.24	1.29	35	1.42	1.03	45	1.20	0.50
16	3.45	2.20	26	2.18	1.26	36	1.40	1.02	46	1.18	0.48
17	3.31	2.11	27	2.13	1.23	37	1.37	1.00	47	1.16	0.47
18	3.20	2.04	28	2.08	1.20	38	1.34	0.58	48	1.15	0.46
19	3.09	1.57	29	2.04	1.17	39	1.33	0.57	49	1.13	0.45
20	3.00	1.52	30	2.00	1.15	40	1.30	0.56	50	1.12	0.44

HOSPITAL DEPARTMENT SURGEONS

LOCATION	NAME	TITLE
San Francisco	Dr. W. W. Washburn	Chief Surgeon
San Diego	Dr. T. F. O'Connell	District Physician and Surgeon
San Diego	Dr. Jerome F. Smith	District Physician and Surgeon
San Diego	Dr. W. H. Geistweit, Jr.	Oculist and Aurist
San Diego	Dr. G. P. Lauren	Oculist
San Diego	Dr. John C. Holman	Dermatologist
National City	Dr. T. N. Lococo	District Physician and Surgeon
Tijuana	Dr. A. M. Reyes	District Physician and Surgeon
Tecate	Dr. Manuel V. Aguilar	District Physician and Surgeon
El Centro	Dr. F. W. Peterson	District Physician and Surgeon
El Centro	Dr. B. E. Schoensee	District Physician and Surgeon
El Centro	Dr. Richard Maddux	District Physician and Surgeon
Calexico	Dr. M. P. Ajalat	District Physician and Surgeon
Mexicali	Dr. Mario Flores	District Physician and Surgeon
Mexicali	Dr. Gaston H. Salazar	District Physician and Surgeon

HOSPITALS

GENERAL HOSPITAL.....SAN FRANCISCO, CALIF.

MERCY HOSPITAL.....HILLCREST DRIVE, SAN DIEGO, CALIF.

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains, in miles per hour, as shown below must not be exceeded, and must be further reduced as prescribed by speed boards or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
MP MP Column:	1	2	3	4
EASTWARD, SAN DIEGO TO EL CENTRO:				
1.10 to 5.23 (18th St.)	20	20	20	15
5.23 to 7.35 (Chula Vista Jct.)	25	25	25	25
7.35 to 7.36 (RR Crossing)	15	15	15	15
7.36 to 15.57 (KP 0.00)	25	25	25	25
KP KP				
0.00 to 15.47	25	25	25	25
15.47 to 17.97	20	20	20	15
17.97 to 36.60 (Redondo)	25	25	25	25
36.60 to 71.41 (MP 59.94)	25	25	25	20
MP MP				
59.94 to 84.50 (Hipass)	25	25	25	20
84.50 to 92.90 (Jacumba)	20	20	20	15
92.90 to 96.61 (tunnel No. 5)	25	25	25	20
96.61 to 98.67	15	15	15	10
98.67 to 99.10 (tunnel No. 8)	10	10	10	10
99.10 to 106.56	15	15	15	10
106.56 to 122.50 (Coyote Wells)	20	20	20	15
122.50 to 147.53	25	25	25	25
147.53 to 147.60	25	25	25	20
147.60 to 147.84 (jct. switch)	10	10	10	10
EASTWARD, TWELFTH ST. NATIONAL CITY TO K ST., CHULA VISTA, Except	..	10	10	10
6.02 to 7.40 (F St. Jct.)	..	15	15	15
EASTWARD, F ST. JCT. TO NORTH ISLAND, Except	..	15	15	15
19.43 to 21.31	..	12	12	12
EASTWARD, SAN DIEGO TO EL CAJON, Except	..	15	15	15
over 13th and 16th St. crossings	..	10	10	10
over 28th, 30th and 32nd St. crossings	..	5	5	5
4.60 to 7.30	..	10	10	10
11.90 to 12.50	..	10	10	10
16.60 to 17.22	..	10	10	10

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
MP MP Column:	1	2	3	4
WESTWARD, EL CENTRO TO SAN DIEGO:				
147.84 to 147.60 (jct. switch)	10	10	10	10
147.60 to 147.53	25	25	25	20
147.53 to 122.50 (Coyote Wells)	25	25	25	25
122.50 to 106.56	20	20	20	15
106.56 to 99.10 (tonnel No. 8)	15	15	15	10
99.10 to 98.67	10	10	10	10
98.67 to 96.61 (tunnel No. 5	15	15	15	10
96.61 to 92.90 (Jacumba)	25	25	25	20
92.90 to 84.50 (Hipass)	20	20	20	15
84.50 to 59.94 (KP 71.41)	25	25	25	20
KP KP				
71.41 to 36.60 (Redondo)	25	25	25	20
36.60 to 17.97	25	25	25	25
17.97 to 15.47	20	20	20	15
15.47 to 0.00 (MP 15.57)	25	25	25	25
MP MP				
15.57 to 7.36 (RR Crossing)	25	25	25	25
7.36 to 7.35 (Chula Vista Jct.)	15	15	15	15
7.35 to 5.23 (18th St.)	25	25	25	25
5.23 to 1.10 (San Diego)	20	20	20	15
WESTWARD, K ST., CHULA VISTA TO TWELFTH ST., NATIONAL CITY, Except	..	10	10	10
7.40 to 6.02	..	15	15	15
WESTWARD, NORTH ISLAND TO F ST. JCT., Except	..	15	15	15
21.31 to 19.43	..	12	12	12
WESTWARD, EL CAJON TO SAN DIEGO, Except	..	15	15	15
17.22 to 16.60	..	10	10	10
12.50 to 11.90	..	10	10	10
7.30 to 4.60	..	10	10	10
over 32nd, 30th and 28th St. crossings	..	5	5	5
over 16th and 13th St. crossings	..	10	10	10

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except;	10
With DF-101 to 107 class engines	6

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains:

NOMINAL CLASS	RUNNING FORWARD		RUNNING BACKWARD WITH TRAIN OR LIGHT
	WITH TRAIN	LIGHT	
C	25	25	25
DF-101 to 107	25	25	25
DF-200 to 203	25	25	25
DS-200	25	25	25
T	25	25	25
Any engine not listed	25	25	25

Steam or Diesel engines when operated in backward motion must not exceed 25 MPH on all curves and 20 MPH when approaching highway or street crossings at grade.

Steam engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

When all weight has been removed from any one pair of drivers ..... 20 MPH
When all weight has been removed from only one wheel of any pair or drivers ..... 20 MPH
When engine truck is removed ..... 20 MPH
When main rod only is removed ..... 20 MPH
When side rod only is removed ..... 20 MPH
When both main and side rods are removed ..... 20 MPH

Dead or disabled engines, and equipment which requires movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine or equipment is to be moved. Such engine or equipment must not be handled in train until train-order designating maximum speed is issued.

Maximum speed of trains handling dead engines of S or SE class 20 MPH; other steam engines 25 MPH; and Diesel engines the speed shown for same engine running forward light.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Line Clearance Circular have been complied with.

When train-order is received indicating that main track is out of service and that trains are to be detoured through a siding or other track, or over a shoofly, necessitating a reduction in normal train speed, signal 16(f) must be sounded on passenger trains one mile before reaching point where train must reduce speed, which must be acknowledged by whistle signal 14(g).

Maximum speed of trains handling locomotive crane, 20 MPH.

Freight cars must not be handled behind occupied passenger carrying cars, except in mixed trains in military or naval movements.

WATCH INSPECTORS

C. D. Fabrin, Manager of Time Service ..... San Francisco
San Diego ..... R. C. Wilson, 523 B St.
El Centro ..... J. L. Bledsoe

LOCATION OF STANDARD CLOCKS

San Diego ..... 8th St. Train Order Office
San Diego ..... Roundhouse
San Ysidro ..... Train Order Office
El Centro ..... Train Order Office

RATING OF ENGINES
In Units of 2000 pounds (Tons)

Engine No.	Nominal Class	Official Class			Garcia to Redondo .9% Grade	Redondo to Hipass 1.4% Grade	Plaster City to Coyote Wells .9% Grade	Coyote Wells to Hipass 2.2% Grade	.4% Grade	Level Track
101, 102	C-31	C-57	22/30	198-S	1625	950	1625	600	3025	8400
2311-2362	T-28, 31	T-63	22/28	162-S	1450	850	1450	525	2725	7625
2363-2384	T-32, 40	T-69	23/28	174-S						
1900-1903	DS-200	DS-33	5¾ x 8	89	530	355	530	225	1000	2000
5101-5115	DF-200-203	DF-36	9 x 10½	139	925	625	925	395	1725	3000
5203-5248	DF-101-107	DF-42	12¾ x 15½	323	2350	1550	2350	975	4450	5000